

Appl. No. 10/659,883
Amdt. dated February 22, 2006
Reply to Office action of November 23, 2005

REMARKS

Reconsideration is respectfully requested. Claims 1-8 are present in the application. Claims 1 and 5 are amended herein.

Claim 6 is objected to as being a substantial duplicate of claim 5.

To overcome the substantially duplicate objection, the applicant amended claim 5 to cancel the silver material.

Claims 1, 2, 5, 6 and 8 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Ito et al (U.S. 6,938,336). Applicant respectfully traverses.

Claim 1 is amended to change the word "by" to "and made of". This is not new matter and is apparent from the review of the claim, as it is a mere wording change.

The Ito et al. patent discloses a method of manufacturing a board having through holes filled with resin and a multi-layered printed wiring board using the board, whereas the present application differs from the manufacturing method of Ito et al. patent in that the present invention discloses a method of fabricating a high density of multi-polyimide-layer DPC lines on a ceramic board. Therefore, the two methods of the Ito et al, patent and the present application are different.

With reference to Figs. 1a to 1 e of the Ito et al. patent, the Ito et al. patent introduced a conventional manufacturing method of a **resin filled board (1)** and asserted that the flat

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resin filling the **through holes (4)** causes a big problem of planarization of the surface of the core board (1). Therefore, the Ito et al. patent amended the conventional manufacturing method. With further reference to Figs. 2a to 2e, one embodiment of the manufacturing method of Ito et al. patent is provided. The Ito et al. patent apparently has one new step before filling the resin into the through holes (4). The new step is polishing both surfaces of the **board (1)** to make that the surfaces smooth. Therefore, hardly any **rein (6)** remains on the surfaces near the **through holes (4)** when the surfaces of the **board (1)** are mechanically polished after the resin (C) is cured, and the **resin (6)** will not fall down into the **through holes (4)**. Again, with further reference to Figs. 4a to 4e of the Ito et al. patent, the **resin (6)** filled board in Fig. 2e is prepared to form the copper clad laminate or an insulating board and plating copper over the board.

In conclusion, the Ito et al. patent indeed provides an unproved method of manufacturing a resin filled board, and the resin filled board has a specific structure as shown Figs. 1a and 2a of the Ito et al. patent. The resin filled board differs from the ceramic board. Basically, the fabricating methods of the two boards are different.

With reference to Figs. 2A to 2E of the present application, since the ceramic board does not have a **conductive layer (3)**

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formed on the surfaces of the ceramic board and **through holes (4)** to be filled with **resin (6)**, the pillars (12) are directly formed in the through holes (11).

Therefore, the ceramic board does not pre-form the **conductive layer (3)** on the surfaces of the board and fill the **through holes (4)** with **resin (6)**. Since the ceramic board does not use **resin (6)**, the ceramic board obviates problem with the **resin (6)** filling down in the **through holes (4)** in a curing step. On the contrary, the Ito et al. patent does not disclose the pillar (12) in the through holes (11) of the ceramic board (10).

Therefore, the manufacturing method of the Ito et al. patent differs from the fabricating method of the present invention. Claims 1, 2, 5, 6 and 8 should overcome the 102 rejection and be allowable.

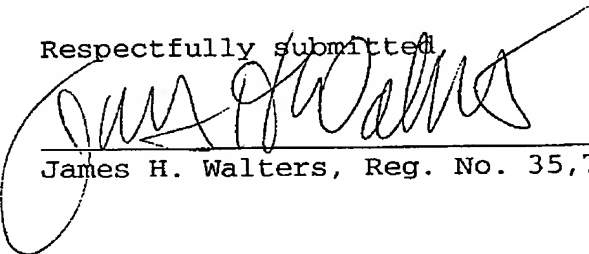
Claims 3, 4 and 7 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ito et al in view of Official Notice. Applicant respectfully traverses.

Since claim 3, 4, and 7 are dependent on the patentable claim 1, they should overcome the 103 objection and be allowable, since the official notice taken does not overcome the noted differences with Ito et al.

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In light of the above noted amendments and remarks, this application is believed in condition for allowance and notice thereof is respectfully solicited. The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

Respectfully submitted,


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